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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,802	01/11/2002	Seymour Levine	MIGAL	8342
33036	7590	07/24/2007		
KEN FISHER 5521 CLEON AVE. NORTH HOLLYWOOD, CA 91601			EXAMINER TO, TUAN C	
			ART UNIT	PAPER NUMBER
			3663	
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			07/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/044,802	Applicant(s) LEVINE ET AL.	
	Examiner Tuan C. To	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 15, 33-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-18, and 19-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation "at least one input of said plurality of inputs in communication with each of said first, second, third, and fourth outputs" (see claim 1) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Amendment

Please disregard the second paragraph in the previous office communication (03/29/2007) that indicated the affidavit filed on 12/1/2003 is sufficient.

The affidavit filed on 12/1/2003 under 37 CFR 1.131 has been considered but is ineffective to overcome the Lin et al. reference.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Lin et al. reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The appendix B and C and the other appendixes do not include evidence to show that the circuit board having a GPS receiver, a barometric sensor, inertial sensors, magnetometers, and telemetry.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-14, 16-32, 55, and 56 in the telephone election 02/2003 is acknowledged. A provisional election was made with traverse.

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This is not found persuasive because the following:

MPEP 808 cites the reasons for insisting upon a restriction requirement. The examiner has showed the current application includes different groups of inventions that are classified in separate classification.

The examiner has to do various class/subclass searches due to more than one invention was claimed during the prosecution of this application if the restriction is not required. Therefore, there is a serious burden on the examiner when examining all claims.

The requirement is still deemed proper and is therefore made FINAL.

An action on claims 1-14, 16-32, 55, and 56 follows:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 3, 5-11, 14, 55 and 56 are rejected under 35 U.S.C. 102(e) as being unpatentable by Lin et al. (US 2002/0021245A1).

The reference to Lin et al. is directed to an integrated GPS/IMU method and micro-system including all features recited in said claims.

Lin et al disclose several features that are relevant to the following: GPS receiver has first output for providing a signal indicative of the position of the navigation system (see figure 3, page 2, paragraph 0019), magnetometer measures earth's magnetic field, said magnetometer has a second output for providing signal (see page 3, paragraph 0047), acceleration sensor measures axis of acceleration of the navigation, having third output (see page 4, paragraph 0066), a rotation sensor measures more axis of rotation, having a fourth output (see page 4, paragraph 0066), a computing device having: several inputs, at least one input communicates with each of said first, second, third, and fourth of outputs (see figure 1), three-axis rate gyroscope is a MEMS (magnetometer) (see page 4, paragraph 0076), power supplied by a battery (see figures 1, and 9), RF data link (see page 5, paragraph 0088), Kalman filter (see page 6, paragraph 0015).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Burgett et al (US 6522298 B1).

As discussed in the previous paragraph, Lin et al disclose all of limitations recited in the independent claims 1 and 55 except for the barometric sensors for measuring atmospheric pressure and providing signals. The second reference mentioned above overcomes the missing feature from Lin et al. Burgett et al. provide a device and method for calibrating and improving the accuracy of barometric altimeters with GPS-derived altitudes. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Lin et al. to include the teachings of Burgett et al. in order to determine the stability of various absolute pressure, and also to maintain the accuracy over a wide temperature range.

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Claims 4, 13, 16, 19, 20, 22, 24-26, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Lin (US 6415223).

Claims 4, 13, 16, 19, 24-26, 29, and 30: The U.S Patent No. 245A1' to Lin et al. disclose all limitation recited in claims 1. However, Lin et al. do not disclose a display means for visually displaying information from the computing device. The second reference to Lin (US 6415223) is directed to a typical navigation system having a display for displaying information (see column 6, lines 3-5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the system of Lin et al. '245A1 by including said display in order to allow pilot, flight operator or crew member easily retrieves the aircraft data or observes it during the flight.

Lin (US 6415223) additionally discloses a database of the magnetic fields of the earth, wherein said database consists: 2-D map, topographical, oceanographic (see column 5, lines 66 and 67; column 6, lines 1-10).

Claim 20: Lin et al. disclose that IMU is a MEMS IMU.

Claim 22: As illustrated in page 3, paragraph 0044, Lin et al. is clearly disclose the MEMS accelerometers.

Claim 31: Lin discloses that with the map display 7 (see figure 1), one pilot is able to retrieve a map data.

Claim 32: Lin also discloses the Kalman filter (see figure 6).

Claims 23, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1), Lin (US 6415223), and further in view of Lemelson et al. (US 2002/0022927A1).

Claim 23: As discussed in the preceding paragraph, the combination of Lin et al. and Lin addresses all features claimed in claim 19 except for an audio transducer. The third reference to Lemelson et al provided the missing features from said combination. As shown in figure 3 of Lemelson et al, speaker driver 72 is a device that allows a pilot receives the related-aircraft information through the audible signal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the system of Lin et al. '245A1 and Lin '223 by the teaching of a speaker in order to provide pilot any information related to aircraft through the audio signal.

Claims 27 and 28: In addition, in figure 3, Lemelson et al. teach a brake servo and accelerator servo.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Billebaud (US 6202931B1), Simmons (EP0697806A1).

In the specification, Lin et al. is missing to point out the memory card that consists of insulating material or corrosion resistant coating. The above-mentioned references to Billebaud and Simmons are both teaching about the memory card that consists the insulating material or corrosion resistant coating (see entire document). Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to include such the material of said memory card in order to protect the card during the transporting from one place to another place or during inserting or removing the card out of computers or electronic equipments.

Response to Arguments

Applicant's arguments filed 12/1/2003 have been fully considered but they are not persuasive. The applicant argued that Lin, et al. reference does not disclose a database of the magnetic fields of the earth. It is not quite persuasive since the magnetic field processing interface (42) connected between the earth's magnetic field detector (20 and the data microprocessor (5), therefore, the processor (5) should include a database for storing the earth's magnetic field data received from the processing interface (42).

Conclusions

It appears that the applicant in this application is a *pro se* applicant (an inventor filing the application alone without the benefit of a Patent Attorney or Agent). Applicant may not be aware of the preferred methods of ensuring timely filing of responses to communications from the Office and may wish to consider using the Certificate of Mailing or the Certificate of Transmission procedures outlined below.

CERTIFICATE OF MAILING

To ensure that the Applicant's mailed response is considered timely filed, it is advisable to include a "certificate of mailing" on at least one page (preferably on the first page) of the response. This "certificate" should consist of the following statement:

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first class mail in an envelope

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addressed to: "Commissioner of Patents and Trademarks, P.O. Box
1450, Alexandria, VA 22313-1450" on (date).

(Typed or printed name of the person signing this certificate)

(signature)

CERTIFICATE OF TRANSMISSION

Alternatively, if applicant wishes to respond by facsimile rather than by mail, another method to ensure that the Applicant's response is considered timely filed, is to include a "certificate of transmission" on at least one page (preferably on the first page) of the response. This method should be used by foreign applicants without access to the U.S. Postal Service. This "certificate" should consist of the following statement:

I hereby certify that this correspondence is being facsimile transmitted
to the United States Patent and Trademark Office, Fax No. (703)____-
____on (date).

(Typed or printed name of the person signing this certificate)

(signature)

These "Certificates" may appear anywhere on the page, and may be handwritten or typed. They must be signed, and the date must be the actual date on which it is mailed or transmitted.

For the purpose of calculating extensions of time, the date shown on the certificate will be construed as the date on which the paper was received by the Office, regardless of the date the U.S. Postal Service actually delivers the response, or the fax is "date-stamped" in. In this way, postal or transmission delays do not affect the extension-of-time fee.

In the event that a communication is not received by the Office, applicant's submission of a copy of the previously mailed or transmitted correspondence showing the **originally** signed Certificate of Mailing or Transmission statement thereon, along with a statement from the person signing the statement which attests to the timely mailing or

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transmitting of the correspondence, would be sufficient evidence to entitle the applicant to the mailing or transmission date of the correspondence as listed on the Certificate of Mailing or Transmission, respectively.

NOTICE TO APPLICANT: In the case of lost or late responses the use of other "receipt producing" forms of mailing a correspondence to the Patent Office, such as Certified Mail, or a private shipper such as FedEx, **WILL NOT** result in the applicant getting the benefit of the mailing date on such receipts. These receipts are not considered to be acceptable evidence since there is nothing to "tie-in" the receipt with the particular document allegedly submitted.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

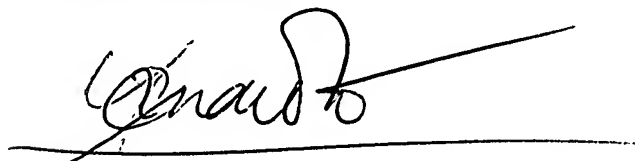
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan C To whose telephone number is (571) 272-6985. The examiner can normally be reached on from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner,

A handwritten signature in black ink, appearing to read 'Tuan C To', is written over a horizontal line.

Tuan C To

July 11, 2007